

Amendments to the Claims:

1. (Currently Amended) A power bus layout design for improving the distribution of power supply current comprising:

a first electrically conductive layer including at least a first power bus and a second power bus,

a second electrically conductive layer including at least a first power bus and a second power bus,

an electrically insulating layer disposed between the first electrically conductive layer and the second electrically conductive layer,

a plurality of vias through said electrically insulating layer conductively connecting said first electrically conductive layer and said second electrically conductive layer and arranged such that said first power bus and said second power bus of said first electrically conductive layer are electrically connected; and

wherein power supply current is provided on said first power bus and said second power bus of said first layer and on said first power bus and said second power bus of said second layer to reduce bottlenecking of said power supply current.

2. (Original) The bus layout design of claim 1, wherein said plurality of vias connecting said first electrically conductive layer and said second electrically conductive layer are arranged such that said first bus and said second bus of said second electrically conductive layer are electrically connected.

Serial No.: 10/648,054

Art Unit: 2826

Page 2

3. (Original) The bus layout design of claim 1, wherein said first and second bus of said first electrically conductive layer overlap said second bus of said second electrically conductive layer.

4. (Original) The bus layout design of claim 1, wherein said first and second buses of the first electrically conductive layer overlap said first and second buses of the second electrically conductive layer across the entire input/output width.

5. (Original) The bus layout design of claim 1, wherein said plurality of vias connecting said first electrically conductive layer and said second electrically conductive layer are arranged such that said first bus and said second bus of said second electrically conductive layer are electrically connected; and

wherein said first and second bus of said first electrically conductive layer overlaps said first and second bus of said electrically conductive layer; across the entire input/output width

6. (Currently Amended) A power bus layout design for improving the distribution of power supply current comprising:

a first electrically conductive layer including a plurality of power buses not conductively connected to each other on said first electrically conductive layer;

a second electrically conductive layer including a plurality of power buses not conductively connected to each other on said second electrically conductive layer;

an electrically insulating layer disposed between the first electrically conductive layer and

Serial No.: 10/648,054

Art Unit: 2826

Page 3

the second electrically conductive layer; and

wherein at least one bus on said first electrically conductive layer is conductively connected to at least one bus on said second electrically conductive layer through said electrically insulating layer; and

wherein power supply current is provided on said first power bus and said second power bus of said first layer and on said first power bus and said second power bus of said second layer to reduce bottlenecking of said power supply current.

7. (Original) The bus layout design of claim 6, wherein at least one bus on said first electrically conductive layer overlaps with at least one bus on said second electrically conductive layer.

8. (Original) The bus layout design of claim 6, further comprising a plurality of vias through said electrically insulating layer, said vias conductively connect at least one bus on said first electrically conductive layer to at least one bus on said second electrically conductive layer.

9-11. (Cancelled)

Serial No.: 10/648,054

Art Unit: 2826

Page 4